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**DWPI Accession Number:** 2001183733

**Title - DWPI:** Coffee beverage and coffee wine preparation, is prepared from grains and screened coffee peel or shell through mixing and fermentation

**Inventor - DWPI:** LI H | XU J

**Assignee - DWPI:** XU J

**Assignee Code - DWPI:** XU J (XUJJ-I)

**DWPI Class:** D13 C | D16 C

**DWPI Family Table:**

Publication Number	Publication Date	Language	DWPI Update	Pages
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**Abstract - DWPI:**

**Abstract - DWPI Novelty:**

A coffee beverage contains the immersion extracted liquid of coffee peel and shell (80-88 wt.%), sugar (10-18 wt.%), CO2 aerated water and edible perfume. A coffee wine is prepared from grains (20-38 wt.%) and screened coffee peel or shell (60-78 wt.%) through mixing and fermentation. Their advantages include easily available raw materials, simple preparing process, and use of their dregs as feed.

**DWPI Manual Codes:** D03-D01 , D03-H01G , D05-E

**IPC - Current:** A23F000526, A23L000238, C23G000302

**IPC Class Table - DWPI:**

SITC000074

IPC - DWPI	Section - DWPI	Class - DWPI	Subclass - DWPI	Class Group - DWPI	Subgroup - DWPI
A23F000524	A	A23	A23F	A23F0005	A23F000524
A23L000238	A	A23	A23L	A23L0002	A23L000238
C23G000302	C	C23	C23G	C23G0003	C23G000302
A23F000526	A	A23	A23F	A23F0005	A23F000526

**ECLA:**

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[51]Int. Cl<sup>7</sup>

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## [12] 发明专利申请公开说明书

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权利要求书 1 页 说明书 3 页 附图页数 1 页

[54]发明名称 咖啡饮料、咖啡酒及其制备方法

[57]摘要

本发明是一种咖啡饮、咖啡酒及其制备方法。其特征在于咖啡饮料含(重量百分比)咖啡皮、壳制取的浸泡液 80—88%,糖 10—18%,适量碳酸水、食用香料。咖啡酒用粮食 20—38%与筛选后的咖啡皮、壳 60—78%混合经一定工艺发酵制得。本发明能变废为宝,消除由扔弃的咖啡皮壳引起的环境污染。经一定的工艺制备的咖啡饮料和咖啡酒,其品质味与咖啡米制作的产品一样,剩余的渣料可用作饲料和肥料。本发明具有原料易得,制造工艺简单,产品制造成本低,开发利用价值高,发展前景可观,创造了新的经济增长点。

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1、一种咖啡饮料,其特征在于含(重量百分比)咖啡皮、壳制取的浸泡液80—88%,糖10—18%,适量碳酸水、食用香料。

2、一种咖啡饮料的制备方法,其特征在于:

(1) 用咖啡脱皮脱壳过程中丢弃的皮、壳作为原料,经筛选后,将选出的咖啡皮、壳在容器中文火炒制,炒制过程中加食盐1%,炒至咖啡色即可;

(2) 将炒制好的咖啡皮、壳粉碎达到5—10目,保证碎片均匀;

(3) 将粉碎后的咖啡皮、壳用10—14倍的饮用水浸泡30分钟左右,然后加温煮沸20分钟左右;

(4) 取出用板框压滤机加压过滤,使其汁液和渣料分离,分离后液汁放入沉淀池沉淀3小时左右,经滤网过滤后放入配制池;

(5) 在配制池中加入10—18%的蔗糖、适量碳酸水和食用香精,使其在配制池内均匀混合沉淀10—15分钟后,检验、灭菌、灌装。

3、一种咖啡酒,其特征在于原料配比为(重量百分比)粮食20—38%,筛选后的咖啡皮、壳60—78%。

4、一种咖啡酒的制备方法,其特征在于:

(1) 用咖啡脱皮脱壳过程中丢弃的皮、壳作为原料,经筛选后,将选出的咖啡皮、壳与20—38%的粮食均匀混合后,放入锅内蒸煮45—60分钟;

(2) 将1—3%的发酵酒药拌入蒸煮后的原料中,放入容器中密封发酵5—10天;

(3) 将发酵过的原料放入烤酒容器内进行蒸馏,再用食用色素对所得咖啡酒进行调色,高度粮食酒调酒度至15—30度即可检验、灌装。

## 咖啡饮料、咖啡酒及其制备方法

本发明涉及食品技术领域，具体地说咖啡饮料、咖啡酒及其制备方法。

咖啡、可可、茶被列为世界三大饮料。咖啡在产量、消费量，经济价值方面均居世界首位，在国际贸易上，咖啡是初级产品中仅次于石油而居世界第三位的重商品，它的消费可为可可的三倍，茶的四倍。其营养价值高，饮用味道可口，有提醒精神、消除疲劳、帮助消化等优点。但目前各地的咖啡果皮、壳都被抛弃，而且还造成一定的环境污染。经多次实验发现，咖啡果皮、壳含有一定量的多种营养成分，而至今未见咖啡皮、壳的开发利用技术。

本发明的目的是充分利用现有技术中的废弃物资，变废为宝，提供一种用咖啡皮、壳生产的咖啡饮料、咖啡酒及其制备方法。

本发明的发明目的是这样实现的：对废弃的咖啡皮、壳回收利用，经过一定的工艺处理，使之成为具有咖啡味的饮料和酒。

具体方案是：咖啡饮料含（重量百分比）咖啡皮、壳制取的浸泡液 80—88%，糖 10—18%，适量碳酸水、食用香料。

咖啡饮料的制备方法是：

- （1）用咖啡脱皮胶壳过程中丢弃的皮、壳作为原料，经筛选后，将选出的咖啡皮、壳在容器中文火炒制，炒制过程中加食盐 1%，炒至咖啡色即可；
- （2）将炒制好的咖啡皮、壳粉碎达到 5—10 目，保证碎片均匀；
- （3）将粉碎后的咖啡皮、壳用 10—14 倍的饮用水浸泡 30 分钟左右，然后加温煮沸 20 分钟左右；
- （4）取出用板框压滤机加压过滤，使其汁液和渣料分离，分离后液汁放入沉淀池沉淀 3 小时左右，经滤网过滤后放入配制池；
- （5）在配制池中加入 10—18% 蔗糖、适量碳酸水和食用香精，使其在配制池内均匀混合沉淀 10—15 分钟后，检验、灭菌、灌装。

咖啡酒的原料配比为（重量百分比）粮食 20—38%，筛选后的咖啡皮、壳 60—78%。

咖啡酒的制备方法是：

- （1）用咖啡脱皮胶壳过程中丢弃的皮、壳作为原料，经筛选后，将选出

的咖啡皮、壳与 20—38% 的粮食均匀混合后,放入锅内蒸煮 45—60 分钟;

(2) 将 1—3% 的发酵酒药拌入蒸煮后的原料中,放入容器中密封发酵 5—10 天;

(3) 将发酵过的原料放入烤酒容器内进行蒸馏,再用食用色素对所得咖啡酒进行调色,用高度粮食酒调酒度至 15—30 度即可检验、灌装。

本发明经多次实验、总结,发现了咖啡皮壳含有一定量的多种营养成分,通过一定的技术处理,完全可以用来制作咖啡饮料和咖啡酒。变废为宝,消除由扔弃的咖啡皮壳引起的环境污染。经上述配方和工艺制备的咖啡饮料和咖啡酒,其品质味与咖啡米制作的产品一样,剩余的渣料可用作饲料和肥料。本发明具有原料易得,制造工艺简单,产品制造成本低,开发利用价值高,发展前景可观,创造了新的经济增长点。

图 1 为本发明的咖啡饮料工艺流程图;

图 2 为本发明的咖啡酒工艺流程图。

以下结合实施例对本发明作进一步的详述,但不限于此例。

实施例 1: (重量百分比)

(1) 用咖啡脱皮脱壳过程中丢弃的皮、壳作为原料,经筛选后,将选出的咖啡皮、壳 10 公斤在容器中文火炒制,炒制过程中加食盐 100 克,炒至咖啡色即可,约炒制 10 分钟左右;

(2) 将炒制好的咖啡皮、壳粉碎达到 8 目,保证碎片均匀;

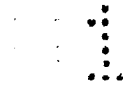
(3) 将粉碎后的咖啡皮、壳用 12 倍的饮用水浸泡 30 分钟,使其成份自然浸出,然后加温煮沸 20 分钟,温度在 100 度左右;

(4) 取出用板框压滤机加压过滤,使其汁液和渣料分离,分离后液汁放入沉淀池沉淀 3 小时,经滤网过滤后放入配制池;

(5) 在配制池中加入 18 公斤蔗糖、适量碳酸水和食用香精,使其在配制池内均匀混合沉淀 10—15 分钟后,检验、灭菌、灌装,得咖啡饮料。

实施例 2: (重量百分比)

(1) 用咖啡脱皮脱壳过程中丢弃的皮、壳作为原料,经筛选后,将选出的咖啡皮、壳 69 公斤与 29 公斤的玉米均匀混合后,放入锅内蒸煮 50 分钟;



(2) 将 2 公斤的发酵酒药拌入蒸煮后的原料中,放入容器中密封发酵 5 - 10 天;

(3) 将发酵过的原料放入烤酒容器内进行蒸馏,再用食用色素对所得咖啡酒进行调色,用高度粮食酒调酒度至 15 - 30 度即可检验、灌装,得咖啡酒。

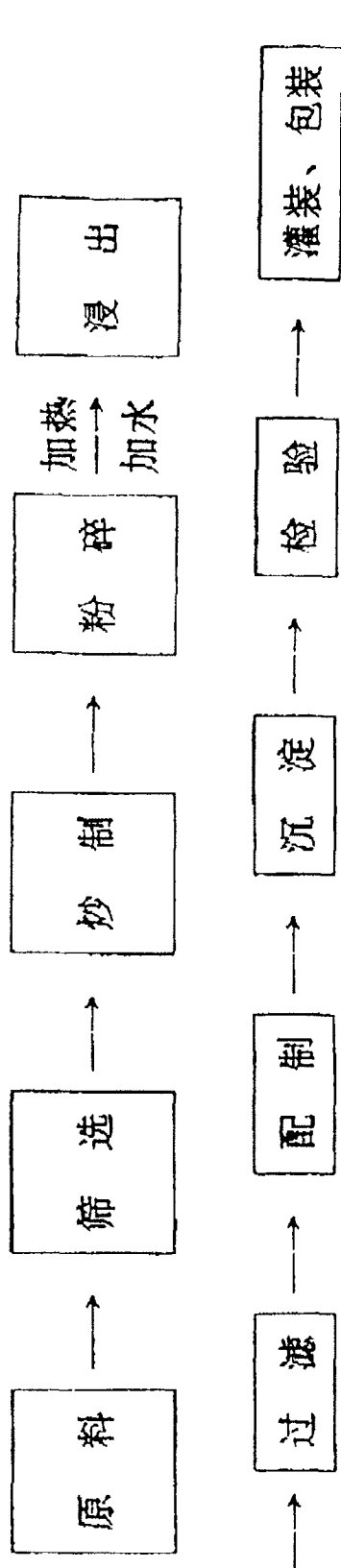


图1

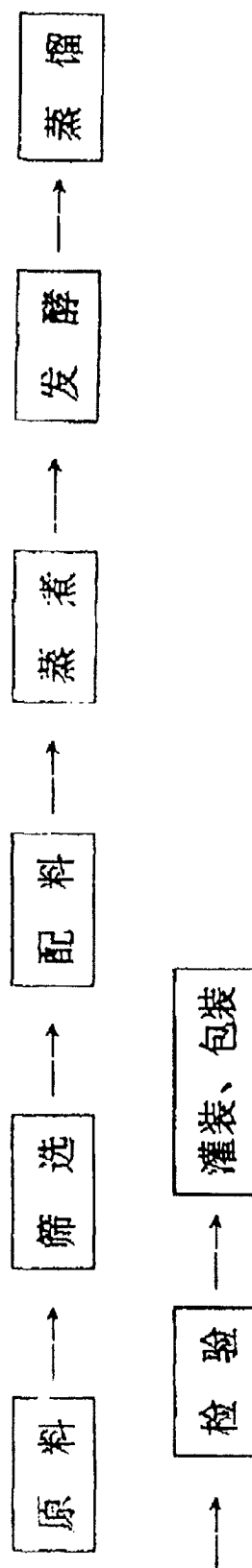


图2



[19] State Intellectual Property Office of the People's Republic of China [51]Int. C1<sup>7</sup>

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**[12] Patent Application Publication**

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[43] **Publication Date:** 22 November 2000 [11] **Publication No.:** CN 1273797A

<p>[22] <b>Application Date:</b> 13 May 1999</p> <p>[21] <b>Application No.:</b> 99114866.5</p> <p>[71] <b>Applicant:</b> Xu Jiankang</p> <p><b>Address:</b> Department of Water and Power Xi Ma He Road, Simao Yunnan Province 665000</p> <p><b>Joint Applicant:</b> Li Hong</p> <p>[72] <b>Originator(s):</b> Xu Jiankang Li Hong</p>	<p>[74] <b>Patent Application Agency:</b></p> <p>Yunnan Patent Law Firm</p> <p><b>Agent(s):</b> Jin Yaosheng</p> <p>This Public Statement contains 1 page of Claims, 3 pages of Specifications, and 1 page of Attached Illustrations.</p>
<p>[54] <b>Title of the Invention:</b> a coffee beverage, a liqueur coffee, and their preparation methods.</p> <p>[57] <b>Abstract:</b></p> <p>This Invention involves a type of coffee beverage, a type of liqueur coffee, and their preparations. The coffee beverage contains, in weight percent, 80-88% liquid made from the parchment and skin of coffee beans, 10-18% sugar, and an adjusted amount of carbonated water and edible flavor. The liqueur coffee, prepared through a designed process that includes fermentation, contains 20-38% grains and 60-78% well-sorted parchment and skin of coffee beans. This Invention helps turn the traditional coffee processing waste into useful products, thus minimizing the environmental impact caused by the discarded coffee parchment and skin. The coffee beverage and the liqueur coffee prepared in this Invention boast the same flavor as products made from coffee seeds. This Invention features easily accessed raw material, simple techniques and low production cost, the commercial exploitation of which promises high value and may serve as a new economic growth point.</p>	

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## Public Statement

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1. This type of coffee beverage contains, in weight percent, 80-88% liquid made from the parchment and skin of coffee beans, 10-18% sugar, and an adjusted amount of carbonated water and edible flavor.
2. This coffee beverage is prepared as follows:
  - 1) Use parchment and skin of coffee beans discarded in the hulling process as raw material. Sort the raw material and put the well-sorted part into a roaster. Roast the material with medium heat, with an addition of salt (1% of the amount of the material) in the process, until its color shifts to a shade of brown.
  - 2) Grind the roasted material to a fairly uniform size of 5-10/64<sup>th</sup> of an inch.
  - 3) Dip 1 part of the finely ground material into 10-14 times drinking water for approximately 30 minutes. Then heat the mixture to boiling point and keep it there for about 20 minutes.
  - 4) Put the mixture through the Plate and Frame Filter Press for the separation of the solid from the liquid. Transfer the filtrate to the settling tank and allow 3 hours for the precipitate to settle. Filter the subsequent solution, and then transfer it to the preparation tank.
  - 5) Put sugar (10-18% of the amount of the solution), together with an adjusted amount of carbonated water and edible flavor, into the preparation tank to produce a uniform mixture, and allow 10-15 minutes for the precipitate to settle. Inspect the prepared liquid before sterilizing it and packing it in cans.
3. This type of liqueur coffee contains, in weight percent, 20-38% grains, 60-78% well-sorted coffee parchment and skin.
4. The preparation of liqueur coffee characterized in that:
  - 1) Use parchment and skin of coffee beans discarded in the hulling process as raw material. Sort the material and mix the well-sorted part with grains (20-38% of the resulted amount). When finely mixed, put the mix into a container and brew it for about 45-60 minutes.
  - 2) Add wine fermenting agent (1-3% of the amount of the roasted mix) to the mix before introducing it to the fermentation tank for sealed fermentation treatment for 5 to 10 days.
  - 3) Transfer the fermented mixture to a wine roaster for distillation. Add food coloring to the distilled liquid for color and set its alcohol content at 15-30 % with high proof grain wine before sterilizing it and packing it in cans.

## Specifications

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### **A Coffee Beverage, a Liqueur Coffee, and their Preparations**

This Invention involves food technology, more specifically, the preparation methods of a coffee beverage and a liqueur coffee.

Coffee, cocoa and tea are the three most popular beverages in the world, while coffee is the crowned beverage in terms of production, consumption and economic value. Coffee is ranked as the third most traded commodity in the world, only next to oil in the primary product category. Coffee consumption is three times that of cocoa, and four times that of tea. Its benefits include high nutritional value and a tasty flavor. It also helps digestion and offers a refreshing experience that offsets flagging energy. The current practice of coffee production results in an environmentally upsetting waste of coffee skin and parchment. The parchment and skin of coffee beans contains a variety of nutrients, as is established by repeated experiments, but no method has yet been developed to exploit its benefits.

This Invention meets its objective: by retrieving the discarded material (i.e. coffee parchment and skin) and treating it through a designed process to prepare a coffee beverage and a liqueur coffee.

**Formula 1:** This type of coffee beverage contains, in weight percent, 80-88% liquid made from the parchment and skin of coffee beans, 10-18% sugar, and an adjusted amount of carbonated water and edible flavor.

#### **Procedures:**

- 1) Use parchment and skin of coffee beans discarded in the hulling process as raw material. Sort the raw material and put the well-sorted part into a roaster. Roast the material with medium heat, with an addition of salt (1% of the amount of the material) in the process, until its color shifts to a shade of brown.
- 2) Grind the roasted material to a fairly uniform size of 5-10/64<sup>th</sup> of an inch.
- 3) Dip 1 part of the finely ground material into 10-14 times drinking water for approximately 30 minutes. Then heat the mixture to boiling point and keep it there for about 20 minutes.
- 4) Put the mixture through the Plate and Frame Filter Press for the separation of the solid from the liquid. Transfer the filtrate to the settling tank and allow 3 hours for the precipitate to settle. Filter the subsequent solution, and then transfer it to the preparation tank.
- 5) Put sugar (10-18% of the amount of the solution) , together with an adjusted amount of carbonated water and edible flavor, into the preparation tank to produce a uniform mixture, and allow 10-15 minutes for the precipitate to settle. Inspect the prepared liquid before sterilizing it and packing it in cans.

**Formula 2:** This type of liqueur coffee contains, in weight percent, 20-38% grains, 60-78% well-sorted coffee parchment and skin.

**Procedures:**

- 1) Use parchment and skin of coffee beans discarded in the hulling process as raw material. Sort the material and mix the well-sorted part with grains (20-38% of the resulted amount). When finely mixed, put the mix into a container and brew it for about 45-60 minutes.
- 2) Add wine fermenting agent (1-3% of the amount of the roasted mix) to the mix before introducing it to the fermentation tank for sealed fermentation treatment for 5 to 10 days.
- 3) Transfer the fermented mixture to a wine roaster for distillation. Add food coloring to the distilled liquid for color and set its alcohol content at 15-30 % with high proof grain wine before sterilizing it and packing it in cans.

This Invention, resulted from repeated experiments, has found that coffee parchment and skin contain an amount of varied nutrients, and that it can be used satisfactorily for the preparation of coffee beverage and liqueur coffee, thereby turn the traditional coffee processing waste into useful products and minimizing the environmental impact caused by the discarded coffee parchment and skin. The coffee beverage and liqueur coffee prepared based on the above formulas and procedures boast the same flavor as products made from coffee seeds. The residues from the processing can be used as feed and fertilizer. This invention features easily accessed raw material, simple techniques and low production cost, commercial exploitation of which promises high value and may serve as a new economic growth point.

Illustration 1 shows the process flow chart of this Invention's coffee beverage preparation.

Illustration 2 shows the process flow chart of this Invention's liqueur coffee preparation.

**Application Example 1:** (in weight percent)

- 1) Use parchment and skin of coffee beans discarded in the hulling process as raw material. Sort the raw material and put 10 kilograms well-sorted part into a roaster. Roast the mass with medium heat, with an addition of 100 grams salt in the process, until its color shifts to a shade of brown.
- 2) Grind the roasted mass to a fairly uniform size of  $8/64^{\text{th}}$  of an inch.
- 3) Dip 1 part of the finely ground material into 12 times drinking water for approximately 30 minutes. Then heat the mixture to boiling point and keep it there for 20 minutes.
- 4) Put the mixture through the Plate and Frame Filter Press for the separation of the solid from the liquid. Transfer the filtrate to the settling tank and allow 3 hours for the precipitate to settle. Filter the subsequent solution, and then transfer it to the preparation tank.

- 5) Put 18 kilograms sugar, together with an adjusted amount of carbonated water and edible flavor, into the preparation tank to produce a uniform mixture, and allow 10-15 minutes for the precipitate to settle. Inspect the prepared liquid before sterilizing it and packing it in cans to get the finished products of this coffee beverage.

**Application Example 2** (in weight percent):

- 1) Use parchment and skin of coffee beans discarded in the hulling process as raw material. Sort the material and mix 69 kilograms well-sorted part with 29 kilograms corn. When finely mixed, put the mix into a container and brew it for about 50 minutes.
- 2) Add 2 kilograms wine fermenting agent to the mix before introducing it to the fermentation tank for sealed fermentation treatment for 5 to 10 days.
- 3) Transfer the fermented mixture to a wine roaster for distillation. Add food coloring to the distilled liquid for color and set its alcohol content at 15-30 % with high proof grain wine before sterilizing it and packing it in cans to get the finished products of this liqueur coffee.

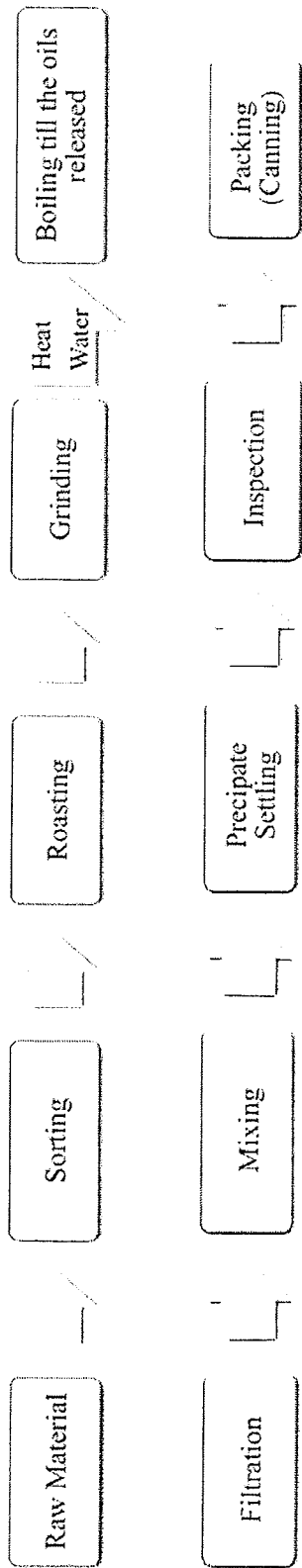


Illustration 1

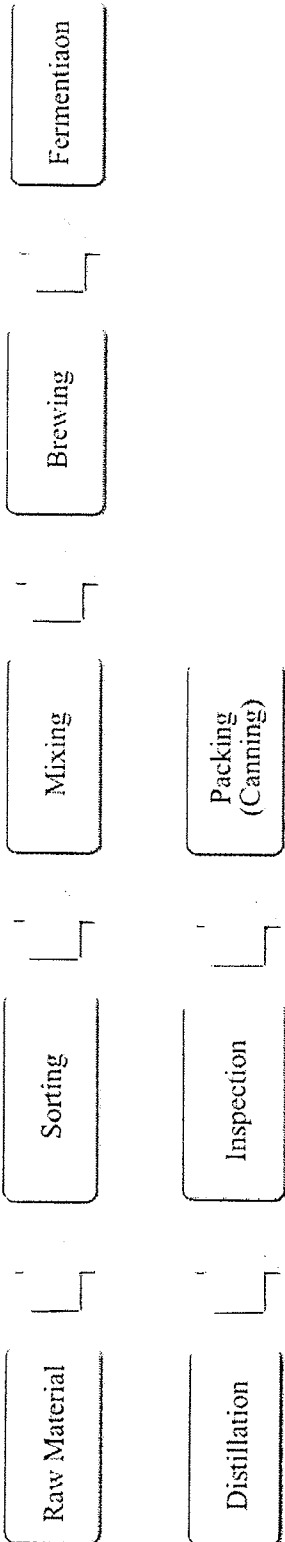


Illustration 2